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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Yellowstone NATIONAL PARK

Copy from FILE No. 143

MONTHLY REPORT

for

OCTOBER

1920.



MONTHLY REPORT

1920.

O c t o b e r

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Attached original notes of Park Naturalist, Electrician, Painter,
& Ch. Ranger Monthly Report.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

November 10, 1920.

Dear Sir:

The following is report on conditions in Yellowstone National Park, and on the operation of the Park, for the month of October, 1920.

GENERAL CONDITIONS:

The monthly mean temperature was 38.2, which was a departure from normal of -3.3 degrees. While this averaged so much colder than usual, it was not so noticeable inasmuch as it was evenly divided up throughout the month and no unusual extremes occurred. The maximum temperature was 73 degrees, which occurred on October 4th. The total precipitation was 1.8 of water, which was 0.66 inches more than normal for October. For 16 days of the month there was an appreciable amount of precipitation. A greater number of days with rain or snow has not been recorded for October in 33 years' record. The total snowfall was 17.1 inches, which has been exceeded for the month but twice, namely, 26.6 in 1919, and 21.8 inches in 1916. The greatest depth of snow on the ground at Mammoth during the month was 5.6 inches on the 16th. At the end of the month, snow laid on the ground at different ranger stations in the Park at the following depth:

Mammoth,	4.3 inches
Norris,	7.8 "
Madison Junction,	3.6 "
Riverside,	3.0 "
Gallatin,	14.0 "
Upper Basin,	3.2 "
Thumb,	9.0 "
Snake River,	11.0 "
Sylvan Pass,	14.7 "
Lake,	4.0 "
Canyon,	4.0 "
Tower Falls,	2.6 "
Soda Butte,	4.7 "
Hellroaring,	9.3 "
Crevice,	6.6 "

Upper Yellowstone

The wind movement was above normal, and the maximum velocity of 42 miles per hour from the southwest on the 7th has been exceeded but once and equaled but once during the past sixteen years. The sunshine was deficient, being but 54% of the possible.

The monthly Meteorological Report furnished by the United States Weather Bureau is enclosed herewith.

While snow lay over practically the entire Park at the end of the month, it was soft and did not hinder the wild animals from getting grass without difficulty, and the grazing and other conditions for them were excellent.

Neither did it hinder traffic on Park roads, except over the high divides, and there was no difficulty in getting around to the main points on the belt line when necessary to do so. Concessioners who had business in the Park ran motor transportation to Upper Basin, Lake Outlet, and Canyon, throughout the month, and our own trucks were in use supplying stations for the winter, bringing in tools and equipment that were in use during the summer, etc. In addition to these, local residents passed through to and from the west entrance and to Cooke City. The high passes - Sylvan, Continental Divide between Upper Basin and Lake, Southern approach road, and Dun-Raven Pass road, were closed by snow to motor transportation about the middle of October.

A few belated private motorists were permitted to pass through the Park and see as much of its wonders as the weather would permit, but there were no accommodations for them and they either had to carry along their own camp equipment, or make one day trips from Gardiner or West Yellowstone. Daily train service is maintained to the north entrance at Gardiner all winter, but the weekly train service to West Yellowstone was discontinued on October 31st.

Travel.

The enclosed Chief Ranger's Travel Reports for October, with similar report for October, 1919, for comparison, indicates more than usual travel after the close of the Park season. Forty-nine permits for using auto-

mobiles in the Park were sold up to and including October 10th, when the practice of charging for these permits was discontinued and no one was permitted to travel on park roads without a special permit. Between the 10th and the end of the month, 32 special permits to make short trips were issued, and five permits were issued to local residents to pass through to West Yellowstone or the south entrance, and to bring back game trophies with them, under seal.

During the month a statement was issued to the press giving an analysis of the total season's travel as compared with other years - copy herewith.

Labor and Supply Market.

There was but little demand for labor, as most of the work in the Park has been discontinued for the winter. Concessioners who are still building and making other improvements have not found skilled labor very plentiful.

Supplies, especially in the line of subsistence, are gradually becoming more reasonable in price, particularly sugar, flour, and vegetables.

II. PERSONNEL.

Employees.

On October 1st there were 125 employees on duty under this office, but by October 31st, this number had been reduced to 74.

A list of employees serving under appointment, with a general statement of the kind of work performed by each class, is given below.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1	Asst. Engineer	In charge of road repair crews at headquarters, and on west and south roads, and making surveys. <i>office</i>
3 5	Clerks	1 disbursing agent and purchasing clerk; 1 stenographer-typist on orders, proposals and vouchers; 1 stenographer-typist (resigned effective October 6); 1 on time keeping and cost accounting (resigned effective October 7); 1 stenographer-typist on files and stenographic work.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
3	Electricians	1 in charge power plant, read meters and did necessary line work (resigned effective October 30); 2 assistants who operated plant regular shifts including Sundays.
1	General Foreman	In charge of construction work in Dunraven Pass. <i>Laid off close Oct 4 own request.</i>
2	Foremen	1 in charge of engineering work and road crews on east side of the Park, and making surveys; 1 in charge of stables at headquarters.
1	Telegraph Operator	- Sent and received all Government Western Union messages; operated one shift on telephone switchboard.
2	Telephone Switchboard operators.	Operated telephone switchboard, daily shifts, including Sundays (1 laid off effective Oct. 30. Services no longer required).
1	Master Mechanic	- In charge of shops, and of repairs to heavy road machinery in the field.
1	Blacksmith	General blacksmith work, including shoeing horses in shop and in the field for crews; overhauling and repairing tools and equipment.
1	Steward and Master of Transportation	- In charge of all transportation and of storerooms.
1	Painter	Renovated quarters at headquarters, also painted signs and equipment.
1	Lineman	In charge of telephone and telegraph system, including crew doing heavy maintenance work in the Park. Did emergency work and installed instruments.
1	Laborer	Miscellaneous work at Headquarters.
1	Handyman	<i>Resigned Nov 15-20</i> Worked in storehouse issuing and receiving supplies.
1	Buffalo Keeper	In charge of tame buffalo herd, and raising forage for same at Lamar River Farm.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1	Asst. Buffalo Keeper	Raising hay for buffalo and other animals on Slough Creek.
1	Park Naturalist	In charge of Information Office, scientific research, timber cutting operations, etc.
1	Plumber	In charge of general plumbing and repairs to same at headquarters.
1	Motorcycle Mechanic	Repairing motorcycles.
2	Automobile Mechanics	Repairing motor trucks and touring cars.
2	Watchman	Made hourly patrols during night at headquarters; took care of office, and kept furnace going during the night.
1	Chief Ranger	In charge of Ranger force.
4	Asst. Chief Rangers	1 in charge of Chief Ranger Office; 1 in charge of southern district; 1 in charge of western district; 1 in charge of northern district and of crews and pack trains building trails and cabins. (1 transferred to Glacier Park, effective Oct. 13).
6	First-Class Park Rangers	5 in charge of ranger stations; 1 making patrols.
16	Park Rangers	In charge of ranger stations; doing patrol work, formations, roads, and trails, checking automobiles, etc. (1 resignation effective Oct. 7th, 1 laid off effective Oct. 10th.)
6	Temporary Park Rangers	Checking automobiles at entrances, doing regular patrol work, and assisting in Chief Ranger's Office. (2 laid off effective Oct. 7th & 22nd).

In addition to the regular employees listed above service under appointment, the following were employed temporarily by the day:

	Nov On Oct. 1st	Nov 3 On Oct. 31st
Mechanics	6 3	3 3
Teamsters	8 2	1 1
Laborers	20 5	5 2
Skilled Laborers	25 6	7 3
Cooks	3 none	None none
	62 16	16 9

Leaves of Absence.

During October annual leaves of absence were granted as follows:

F.J. Winess,	Park Ranger,	6 days - Oct. 1-7
E.S. Bowman,	" "	2 " - Oct. 2-4
C.O. Lauer,	Clerk,	6 " - Oct. 1-7
C.A. Lindsley,	Asst. Supt.,	1 " - Oct. 2
C.A. Lindsley,	Asst. Supt.,	1 " - Oct. 6 (noon)-Oct. 7 (noon)
Carrie O. Hammerser,	Stenog-Typist,	1 " - Oct. 23 (noon)-Oct. 25 ")
Geo. F. Younger,	Electrician,	7 " - Oct. 23-30.
Geo. F. Dustman,	Park Ranger,	11 " - Oct. 23-noon-Oct. 25
C.A. Lindsley,	Asst. Supt.,	15 " - Oct. 10-27
James B. Small	Gen. Foreman	6 " " 4-9

Appointments.

- Oct. 3: Albert E. Bicknell, Park Ranger, \$1200 per annum (WAE).
 Oct. 1: Clifford Anderson, Park Ranger, \$80 per month.

Separations.

- Oct. 7: Clarence O. Lauer, Clerk, \$1500 per annum, *resgd*
 Oct. 6: Alexander C. Wiley, Clerk, \$1360 per annum, *resgd*
 Oct. 5: James B. Small, General Foreman, \$1920 per annum, *resgd*
 Oct. 7: Frank J. Winess, Park Ranger, \$1200 per annum, *resgd*
 Oct. 22: Sam H. Hurless, Park Ranger, \$100 per month, *Laid off*
 Oct. 7: Dean H. Hausman, Park Ranger, \$1200 per annum, *resgd*
 Oct. 10: Elmore M. Mead, Park Ranger, \$1200 per annum, *Laid off*
 Oct. 30: Elizabeth B. Allan, Telephone Operator, 35¢ per hour, *Laid off*

III. WORK COMPLETED:

(a) Construction of Physical Improvements.

No new construction work was undertaken during the month except that the snowshoe cabin at Buffalo Lake, on the west line, was practically rebuilt of logs chinked with mud, and a floor of hewed poles was put in, also window shutters and doors of two inch planks.

Rangers Anderson and Winn, stationed at Soda Butte, built a new snowshoe cabin near the park line at the northeast corner. This cabin is about the usual size, 12 x 16, with pole and dirt roof, provided with window, window shutters, and doors.

The linemen moved the switchboard from one of the downstairs rooms in the old Bachelor Quarters to a second-story room in the rear of the building, where it is to be permanently located.

(b) Maintenance and Repair of Physical Improvements.

A small crew with pack train, under the direction of Assistant Chief Ranger Harry Trischman, repaired the snowshoe cabin at Cascade Creek on the south line. The roof was braced up, a new door, new window, and window shutters, provided.

(c) Miscellaneous Improvement Work.

The same crew that repaired the snowshoe cabins installed a 3/4" steel cable across Fall River three miles east of Bechler Station on the south line of the Park. This cable is 225 feet long and is provided with a car, with a capacity of two people, for crossing the river. This is necessary for the reason that the river at the point where it must be crossed is very swift and wide, and it is a hardship to have to ford it during the severe cold of the winter when patrols must be kept up.

The two engineers were engaged throughout the month in making a survey of the proposed Firehole Cut-off Road and the proposed new road through Lower Geyser Basin by way of the Black Warrior and the Great Fountain Geyser. They were still engaged on this work at the end of the month.

The shop force was engaged in repairing and overhauling motor vehicles and heavy road machinery.

The carpenters completed the work of remodeling the old hospital at headquarters for use as bachelor quarters, with a general mess for unmarried employees. The painters also completed their work in this building and also renovated other living quarters, replaced broken glass in windows, and made a few necessary road signs.

Rangers at stations in the Park did minor repairs on their stations, and these stations were supplied with rations, etc., for the winter. Snowshoe cabins that were not rationed in September were supplied with necessities for the winter.

The plumber and one assistant were engaged during the month in making general repairs to plumbing at headquarters, especially in the old hospital, which was being remodeled for bachelor quarters, and in providing cut-offs to the water mains leading into certain buildings which are not occupied in winter.

(d) Service to the Public.

Inasmuch as the Park season closed in September and the travel was inconsequential, there is but little of this service to report. It was necessary, however, to continue the checking service throughout the month at the north and west entrances and until about the middle of the month at the east and south entrances. As will be seen by the enclosed Chief Ranger's Travel Report, ³³¹ tourists entered the Park during the month, but most of these came in at the northern entrance and made short trips or else were on their way to the hunting grounds west and south of the Park.

Information Service. The Information Office was not maintained during the month. The few inquirers who came for information were taken care of in the Chief Ranger's Office or by our clerks. Mr. Skinner, our Park Naturalist, who has had charge of the Information Bureau, was away from headquarters practically all of the month collecting new data for next year.

IV. WORK IN PROGRESS.

(a) Construction of Physical Improvements.

No construction work was in progress at the close of the month except by the Park Concessioners, which is noted

under a different heading.

(b) Maintenance and Repair of Physical Improvements.

There were no crews in the field engaged in maintenance work at the end of the month.

The shop force, the painter, plumber, and electricians, and linemen, were engaged at the end of the month in usual maintenance and repair in their respective departments, as indicated under paragraph III.

The electricians ran the power plant nineteen hours per day throughout the month. A total of 11,660 kilowatt hours of current were generated, of which 3095 were consumed by Park utilities, 945 for street lighting, and 7620 for lighting Government buildings and for power for shops and wastage on the lines. The peak-load for the month was 42 KW. In addition to running the plant, the electricians made necessary repairs to lines and installed new lights, fuses, etc., where burned out.

Improvements by Concessioners.

Work was continued on the new gas filling station which is being installed at Whittaker's Canyon store. The Hotel Company completed the work of getting out logs for the addition to the dining room at Old Faithful Inn preparatory to having this work done in the spring before the opening of the season. This Company also had a considerable crew at work on the helps' dormitory at the Canyon, and this work was nearly completed at the end of October. They also did considerable work in graveling and repairing their roads in the grounds at the Canyon Hotel. The Chinaman in charge of the Hotel Company's garden worked throughout the month preparing the garden, located on the Gardiner River, for next year's crop.

The Yellowstone Park Transportation Company had several mechanics at work overhauling motor transportation at Mammoth, also a considerable force on the work of installing the new steam heating plant for heating the garage and mess house at Mammoth. This work will probably be completed before the end of the present month.

The Yellowstone Park Camps Company maintained three construction crews throughout the month. One of these crews at Mammoth began the construction of a laundry building connected with Mammoth Camp and located near the proposed site for the main building at Mammoth. This is to be a frame

building, in size 96 x 45 feet, and provided with rooms in the basement for employees. It is to be steam heated, and their machinery will be driven by electric motors furnished from our power plant.

Another crew began the construction of a concrete swimming pool, 20 x 40 feet in size, with a maximum depth of 8 feet, in connection with Camp Roosevelt near Tower Falls. This pool is to be supplied with water from Lost Creek.

At Hamsboth another carpenter crew began the work of constructing a new dining room, 100 x 50 feet in size, with an adjacent kitchen 55 x 70 feet in size. This building is made of logs, with shingled roof and stone fireplaces. It was about 75% completed at the end of the month, and it is their plan to finish it this fall if the weather will permit.

V. PLANS OR PROPOSED WORK:

The work proposed for the month of November includes continuing, by the engineers, of the survey of the proposed new road through the Lower Geyser Basin, the usual maintenance and operation work by the linemen, the electricians, and the shop force, at headquarters; the overhauling of motor vehicles and heavy road machinery by the blacksmiths and automobile mechanics; the remodeling, repairing, and renovation, of buildings by the carpenter, plumber, and painters; the continuation of special patrols on the Park lines by the ranger force during the hunting season.

The Camps Company, the Hotel Company, and the Transportation Company, will continue to completion, if the weather will permit, the work under progress at the close of October.

The harvesting of ice for use the ensuing year will be undertaken provided it is thick enough before the end of November.

VI. POLICIES.

No new policies were adopted during the month of October.

VII. COST OF OPERATION.

Cost reports showing expenditures for September and October will be transmitted as soon as practicable.

VIII. OTHER MATTERS OF INTEREST:

Wild Animals.

General conditions for wild animals were excellent during the month. The weather was not severe enough to bring them down to any extent, and forage was very plentiful and easy to get everywhere. While there was snow over most of their range, it was not deep and was so soft that it did not hinder the wild animals from feeding. A noticeable fact is the lack of reports from rangers and others who were traveling in the Park of the seeing of elk, deer, antelope, and sheep, but it is still too early to determine whether this is due to their scarcity, or to the fact that they have not yet come to their usual fall and winter ranges.

Buffalo, same herd. The buffalo keeper reported that the tame buffalo, like some of the wild animals he had observed, were acting in an unusual manner for this time of the year. A year ago, preceding a very long, severe winter, the tame buffalo, as well as the wild animals, seemed possessed all winter long to get down to lower altitudes, and it was hard to hold them in the Park. This fall they seem to have opposite tendencies, and the tame buffalo, which were brought down from Mount Morris so as to segregate the young ones for vaccination, readily returned to the higher levels without being driven. Possibly this tendency accounts for the apparent scarcity of game animals this fall. Preparations were made for vaccination of this year's crop of buffalo calves, and the work is to be done by veterinarians furnished by the Bureau of Animal Industry. One of the old buffalo bulls was found dead near Soda Butte, and the cause of death is still a conjecture. When found it had been dead too long to permit of using the robe for mounting.

Buffalo, wild herd. No reports were received from the wild buffalo during the month.

Bears. Bears were still out and giving more or less trouble to rangers on station and winter keepers at the close of October. Several complaints were received of their depredations during the month. A small black bear broke into the Lake Ranger Station on the night of October 10th and it was necessary to kill it in self defense, as it charged the rangers when they tried to

drive it out of the house. The winter keeper at Canyon Hotel also killed a bear, on October 13th, that had broken into the hotel several times. He was not entirely supported in his contention that this course was necessary, but in view of possible doubt, he was not tried for the offense, but instead his permit to keep an unsealed rifle for protection was revoked.

Antelope. Quite a number of antelope have put in an appearance near the north line, and a reasonable number of young are noted with the herd.

Deer. But few deer have been seen. If there are many, they are well scattered.

Elk. Such reports as have been received to date indicate a serious shortage in the usual large herds of elk. Either they have not yet come down, or the losses of last winter were underestimated and there are but a few thousand left. A few have been outside of the Park on the northeast and west, and hunting parties are in evidence not far from the Park lines wherever there is an open season under State laws. But few have been successful in bagging game up to this date.

Mountain Sheep. A few mountain sheep were seen in their old haunts on Mt. Everts during the month.

Moose. Reports are numerous of moose having been seen in small numbers in nearly all parts of the Park and they are in excellent condition. Moose are also found outside of the Park in several places, as they are also protected by the game laws of the adjoining states. A bull moose was shot in Montana during October by a gentleman from an eastern state, in charge of a local guide. He claimed to have a permit from the State Game Warden to get this animal as a specimen for scientific purposes, to be mounted for a small school in his state. The authority of the State Game Warden to issue such a permit has been questioned. This moose probably belonged to the Park, as it was not far from the line where about twenty have been known to feed for several months past. A special report has been made on this incident.

Carnivora. Observation and reports indicate an increase in the number of coyotes and wolves in the Park. Coyotes are seen frequently wherever any other game is found in the Park. Rangers are enjoined to destroy them whenever they have an opportunity, and half a dozen permits have

been issued to others connected with the National Park Service and winter keepers to do so.

Grazing. Grass was plentiful for wild animals, and conditions were such that it was easily obtained throughout the month.

Birds. This subject is treated further on in this report under the heading of Seasonal Changes, by Park Naturalist Skinner. The lateness of the migration of summer birds was generally noticeable. Robins and bluebirds were still observed in the Yellowstone Valley near Livingston, Montana, as late as October 26th.

Fishes. Fishing was good in Gardiner River, and also in the Firehole and Madison Rivers, through October. Fishing was prohibited in the Madison River, beginning October 15th, for the reason that the fish needed protection while spawning, and also that it was hard to keep track of the numerous parties fishing near the west line and keep up the necessary patrols on the Park lines near the hunting grounds.

Seasonal Changes.

Botanical. All growth of vegetation stopped before the first of the month, although in a few warm, sheltered places, a half dozen blossoms of fringed gentians and dandelions, and green grass, persisted until October 25th. A few leaves remained on the quaking asp trees and willows until the 10th.

Birds: The last of the following birds were seen: baldpate duck on the 10th; solitary sandpiper on the 15th; redbelt hawk on the 16th; pipit on the 18th; vesper sparrow on the 23rd; mountain bluebird on the 26th; white crown sparrow on the 26th; meadowlark on the 27th; Brewer blackbird (on the Park Plateau) and marsh hawk on the 29th; pink-sided junco (on the Park Plateau) on the 30th; and tree sparrow on the 31st. The following birds arrived from the north: rough-leg hawk on the 10th; intermediate junco on the 15th; and northern shrike on the 18th. On the 15th, nutcrackers began to come down to Mammoth for the winter.

Animals: The Whitetail deer had all changed to the gray coat of winter during the first week of October. Mule deer began "the rut" about the 11th and had not yet finished at the end of the month. Between the 5th and the 15th, the mule deer greatly increased in numbers at Mammoth. On the 25th, I found mule deer coming down from the Madison Plateau, and a day or two later I found about twenty in the heavy timber at the mouth of the Little Firehole River, apparently established for the winter.

An elk was heard bugling as late as the 29th, but the rutting season was apparently over about the 20th. Elk were common about the Upper Geyser Basin during the middle of the month, but moved down toward Fountain on the 22nd and 23rd. I found about thirty head about the mouth of the Little Firehole on the 27th. A few fresh tracks were seen on the Madison Plateau, north of the Little Firehole, on the 27th, and the last six elk moved out of the Little Firehole meadows on the same date. There were about eighty elk on the Fountain meadows on the 29th, but none along the Nez Perce valley. No elk have appeared at Mammoth on the plaza as yet.

A bull moose was seen in Willow Park opposite Apollinaris Spring on the 15th.

Snowshoe rabbits began changing to the white coat of winter on the 15th and jack rabbits ten days later. A weasel was seen in the white coat on the 31st.

At the close of the month there were still a few bears out of winter quarters.

Reckoning from this data, the season is nine days later than the average.

Arrests and Violations of Law.

Special efforts were made on all sides by the park ranger force to provide the very best possible protection for game animals on all park lines during the open hunting season in adjoining states. All available rangers were concentrated on these lines, with careful instructions as to just how and when to make their patrols so as to get the best results. Hunting parties have been numerous in the vicinity of the park lines since October 1st, but from all reports that were received, it would seem that five elk and two deer were all that were killed up to the end of October, and these several miles away from the park. Three hunting parties were camped on Madison River near the west line of the park during the month, but were unsuccessful in securing any game and finally became discouraged and left. It was reported that two elk were killed in the

Gallatin Mountains, more than five miles away from the west line of the park. On the east, eleven hunting parties were known to have been camped near the park line on Jones Creek without success and only one elk was known to have been killed in that country during October. One arrest was made by Ranger Wisdom, in charge of the Sylvan Pass Station, which had the effect of discouraging hunting in that vicinity, where, due to the general roughness of the country, it is sometimes a little difficult for strangers to locate exactly the park line. Three trapping parties have located on the north of the park and have placed their trap lines on Slough Creek and its headquarters, requiring extra vigilance on the part of our rangers in that vicinity. Eleven hunters from Montana points were also reported after big game in that country, and reports indicate that they had killed two elk on Boulder Mountain. One moose was killed in that section, under a special permit from the State Game Warden. Three hunting parties are reported in the vicinity of Grevice Mountain on the north of the park.

The following arrests were made during October, namely:

C.A. Pattison, Cody, Wyo., Oct. 16, 1920.

Ranger R.R. Wisdom arrested Pattison on a charge of killing an elk within the Yellowstone National Park. He was found guilty by U.S. Commissioner John W. Meldrum and fined \$100 and costs. (\$5.50)

Clay Tyler, Cody, Wyo., Oct. 20, 1920.

Tyler was taken into custody by Ranger R.R. Wisdom, who found said party hunting with the Yellowstone National Park. He was tried before the U.S. Commissioner on the charge and ordered to pay a fine of \$25 and costs. (2.75)

John L. Stillwell, Texas, Oct. 20, 1920.

Stillwell was taken into custody with Tyler and dealt with in the same manner.

Other special work accomplished by the ranger force during the month included a three weeks' inspection tour of the borders of the park by Chief Ranger McBride with saddle and pack horses; taking down the large expensive road signs near junction points in the park and

storing them safely for the winter, and placing a gauge on the shore of Yellowstone Lake for making observations on the depth of the lake. Reading of this gauge indicated that the lake fell $4\frac{1}{2}$ inches during the last half of October.

Four steers, one cow and one calf, impounded by order of Superintendent Albright September 1st, after receiving due publicity in the districts in which they were found, became the property of the United States Government October 1st and will be sold at public auction as prescribed by the Department of the Interior December 1st.

They are described as follows:

Four (4) steers, one year and one half old.
Brand -- D (D bar) on right side.

One (1) cow,
Brand -- V.A. on left hip.

One (1) calf, suckling.
Unbranded.

Notices of sale for the above named stock were mailed to the following:

W.A. Hall Company, Gardiner, Montana.
Postmaster, Gardiner, Montana.
Postmaster, Emigrant, Montana.
Postmaster, Livingston, Montana.
Postmaster, Yellowstone Park, Wyo.
Postmaster, Corwin Springs, Montana.
Posted in Park.

At the new station established on the Upper Yellowstone in the southeast corner of the park, snow fell to a depth of two feet and it was necessary to send in the horses and take to the use of skis for patrolling before the end of October.

Forest Fires.

No forest fires occurred during the month.

Accidents and Casualties.

No accidents were reported. The only casualty reported was the death on October 5th of Roscoe Harold Bonnell, the infant son of Mr. and Mrs. Fred L. Bonnell. This child was born on September 9, 1920, as reported last month, took whooping cough, which has been prevalent among the children since the latter part of September, and due to its being so young, it was impossible to save it though heroic work was done over it by Dr. Crawbuck.

Natural Phenomena.

The Fountain Geyser played on an average every two hours, but the duration of each eruption was only about fourteen minutes. The Great Fountain played on an average interval of nine hours. The White Dome played on an average every twenty-eight minutes for three minutes.

At the Upper Geyser Basin, Old Faithful Geyser played about every 64½ minutes, Daisy every eighty minutes; Riverside every seven hours; and the Grand every ten to twelve hours. The Grotto, Lion, and Sawmill Geysers played frequently on almost every day. The Giant played on the 11th and 18th and probably at other times also. The Giantess played on the 15th and 28th. The Beehive and Castle Geysers remained inactive.

I am very much pleased to be able to report that the Punchbowl is now rapidly regaining its former wonderful coloring.

A series of observations on the Lone Star Geyser developed some interesting data on its action. The main eruptions were found to be two hours and fifty minutes apart and to last for fifteen minutes, followed by a steam period and accompanying roar of escaping steam for ten minutes, and then a gradual decrease in the amount of steam to normal. About one hour and forty minutes after a main eruption, activity began again with a jet of water a foot high for two or three seconds, followed by about twenty more spurts a minute apart and gradually increasing in height to 25 feet and in duration of eruption to two minutes, then

a quiescent period of about seventeen minutes, followed by a secondary eruption lasting four minutes to a height of 25-30 feet. The main eruption followed about thirty minutes later. The preliminary spurts and the secondary eruption were mostly water whereas the main eruption gave out much steam. These movements were so remarkably regular as to cause me to believe that this is the most regular of all our geysers.

Special Visitors.

Governor Carey, of Wyoming, passed through the park on October 8th.

District Forester F.W. Merrill, of Missoula, Montana, and Forest Supervisor Ernest Shaw, of the Absaroka National Forest, Livingston, Montana, on October 23rd.

Mrs. Robert C. Morris, of New York, who spent the summer in the park and at a small ranch on Slough Creek where it crosses the park line, left the park on October 7th.

Motion Pictures.

No motion picture operators visited the park during the month.

Miscellaneous.

Between September 29th and October 6th, Superintendent Albright made a trip of about two hundred miles over the trails in the southern part of the park, exploring country that has been but little known heretofore. He has made a special report covering the results of this trip.

Entertainments. The entertainments which have been usually held weekly in the Post Exchange Building for the amusement of employees were discontinued at the close of the tourist season in September and have not yet been resumed due to prevalence of whooping cough among the children, and the illness of the wife of one of our automobile mechanics who has rooms in the same building.

Religious Services. Church services were held morning and evening one Sunday during the month, namely,

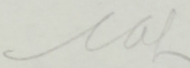
October 31st, by Rev. J.F. Pritchard, of Emigrant, Montana.

Copies of Circulars numbered 29 to 34 inclusive, effecting the organization of employees and issued during October, are enclosed for your information. Copy of a memorandum to the Press, compiled the latter part of October in the Chief Ranger's Office for release November 10th, dealing with park travel for the past season, is also enclosed.

X. RECEIPTS AND REMITTANCES.

Report of moneys due, collected, and transmitted, together with money orders and draft, totaling \$861.73, as called for by the reports, made on the regular printed forms, is enclosed. In this connection, attention is invited to the fact that this remittance includes the sum of \$50 tendered by Mesdames Pryor and Trischman as rental for their tract of land at Mammoth for store purposes for the period ending December 31, 1920. Acknowledgment of receipt is requested.

Cordially yours,


Chester A. Lindsley,
Acting Superintendent.

The Director,
National Park Service,
Department of the Interior,
Washington, D.C.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

ICE OF THE SUPERINTENDENT

November 1, 1920.

REPORT ON SEASONAL CHANGES.

To: Chester A. Lindsley, Asst. Supt.,

From: M.P. Skinner, Park Naturalist.

Botanical: All growth of vegetation stopped before the first of the month; although in a few warm, sheltered places, a half dozen blossoms of fringed gentians and dandelions, and green grass persisted until October 25th. A few leaves remained on the quaking asp trees and willows until the 10th.

Birds: The last of the following birds were seen: baldpate duck on 10th, ~~robin~~ and solitary sandpiper on 15th, redtail hawk on 16th, pipit on 18th, vesper sparrow on 23rd, mountain bluebird on 26th, white crown sparrow on 26th, meadowlark on 27th, Brewer blackbird (on the Park Plateau) and marsh hawk on 29th, pink-sided junco (on the Park Plateau) on 30th, and tree sparrow on 31st. The following birds arrived from the north: rough-leg hawk on 10th, intermediate junco on 15th, and northern shrike on 18th. On the 15th, nutcrackers began to come down to Mammoth for the winter.

Animals: The Whitetail deer had all changed to the gray coat of winter during the first week of October.

Mule deer began "the rut" about the 11th and had not yet finished at the end of the month. Between the 5th and the 15th the mule deer greatly increased in numbers at Mammoth. On the 25th, I found mule deer coming down from the Madison Plateau and a day or two later I found about twenty in the heavy timber at the mouth of the Little Firehole River, apparently established for the winter.

An elk was heard bugling as late as the 29th but the rutting season was apparently over about the 20th. Elk were common about the Upper Geyser Basin during the middle of the month but moved down toward Fountain on 22d and 23rd, but

I found about thirty head about the mouth of the Little Firehole on the 27th. A few fresh tracks were seen on the Madison Plateau, north of the Little Firehole on the 27th and the last six elk moved out of the Little Firehole meadows on the same date. About eighty elk on the Fountain meadows on the 29th but none along the Nez Perce valley. No elk have appeared at Mammoth on the plaza yet.

A bull moose was seen in Willow Park opposite Apollinaris Spring on the 15th.

Snowshoe rabbits began changing to the white coat of winter on the 15th and jack rabbits ten days later. A weasel seen in the white coat on the 31st.

At the close of the month there were still a few bears out of winter quarters.

Reckoning from this data, the season is 9 days later than the average.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

ICE OF THE SUPERINTENDENT

November 1, 1920.

REPORT ON NATURAL PHENOMENA.

To: Chester A. Lindsley, Asst. Supt.,

From: M.P. Skinner, Park Naturalist.

The Fountain Geyser played on an average every two hours, but the duration of each eruption was only about 14 minutes. The Great Fountain played on an average interval of nine hours. The White Dome played on an average every 23 minutes for three minutes.

At the Upper Geyser Basin: Old Faithful Geyser played about every 64½ minutes, Daisy every 80 minutes, Riverside every 7 hours, and the Grand every 10 to 12 hours. The Grotto, Lion, and Sawmill Geysers played frequently on almost every day. The Giant played on the 11th and 18th and probably at other times also. The Giantess played on the 15th and 28th. The Beehive and Castle Geysers remained inactive.

I am very much pleased to be able to report that the Punchbowl is now rapidly regaining its former wonderful coloring.

A series of observations on the Lone Star Geyser developed some interesting data on its action. The main eruptions were found to be 2 hours and 50 minutes apart and to last for 15 minutes, followed by a steam period and accompanying roar of escaping steam for 10 minutes, and then a gradual decrease in the amount of steam to normal. About 1 hour and 40 minutes after a main eruption, activity began again with a jet of water a foot high for two or three seconds, followed by about twenty more spurts a minute apart and gradually increasing in height to 25 feet and in duration of eruption to two minutes; then a quiescent period of about 17 minutes, followed by a secondary eruption lasting four minutes to a height of 25-30 feet. The main eruption followed about thirty minutes later. The preliminary spurts and the secondary eruption were mostly water whereas the main eruption gave out much steam. These movements were so remarkably regular as to cause me to believe that this is the most regular of all our geysers.

Report of Painter for month of October, 1920.

- 1 Headquarters Bldg., Calceining, varnishing &
- 2 " " " "
- 3 " " " "
- 4 " " " "
- 5 " " " "
- 6 " " " "
- 7 " " " "
- 8 " " " "
- 9 " " " "
- 10 " " " "
- 11 On leave.
- 12 Headquarters Bldg., 6 hrs. (Putting in glass at Dyestman's Quarters 2 hrs)
- 13 Made five signs for Madison River & West Yellowstone
- 14
- 15 Headquarters Bldg. ✓
- 16 " " " "
- 17 " " " "
- 18 " " " "
- 19 McFarlands Quarters 4 hours.
- 20 " " " "
- 21 " " " "
- 22 " " " "
- 23 " " " "
- 24 " " " "
- 25 McFarlands Quarters. Calceining & varnishing
- 26 " " " "
- 27 Headquarters Bldg. 4 hrs. Commencing glass, 4 hrs.
- 28 " " " "
- 29 " " " "
- 30 Brightons putting in glass & Shop work,
August C. Neumann.

Sept 30

1920

monthly report of Electric Power production
for month ended September 30-1920.

Total generated,	15 930 Kw
Consumed by Concessioners	5504 " "
Consumed by St Lighting,	1155 " "
Consumed by Government buildings shops and lines,	9070 " "
Peak load,	68 Kw

Geo P Jaunges,
Electrician.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

CHIEF RANGERS MONTHLY

REPORT

TO THE SUPERINTENDENT'S OFFICE

OCTOBER 1920.

Compiled by Park Ranger Bishop
Chief Ranger's Office.

Department of the Interior
National Park Service
Yellowstone National Park.

Chief Ranger's Monthly Report
to the Superintendent.

MONTH OF OCTOBER 1920.

I. GENERAL CONDITIONS

Seemly for the benefit of the depleted game herds of the park, October, through the entire month was beneficial to all game with mild weather and abundant feed. Though snow lies over practically all of the park at the present time the first three weeks of the month carried fair weather with several slight snow falls.

The favorable weather aided greatly in the protective work of the Ranger force and saved several thousand dollars for maintenance of the Ranger department.

Ranger Station reports indicate snow in the following depths:

Mammoth	4.3 inches.
Horris	7.8 inches.
Madison Junction	3.6 inches.
Riverside	3.0 inches.
Gallatin	14.0 inches.
Upper Basin	3.2 inches.
Thumb	9.0 inches.
Snake River	11.0 inches.
Sylvan Pass	14.7 inches.
Lake	4.0 inches.
Canyon	4.0 inches.
Tower Falls	2.6 inches.
Soda Butte	4.7 inches.
Hellroaring	9.3 inches.
Crevice	6.6 inches.

Copy

Ranger's patrolling the unprotected borders of the park claim that but five elk have been killed and two deer during the hunting season to date, while the elk herds suffered a loss running in the thousands during the same period of 1919. It was also claimed by these Rangers that the animals killed were from five to twenty miles away from the park lines.

Very few animals of the big game caliber have been seen in the lowlands. Though large herds come in contact with the Rangers daily, it is claimed by them that the elk and deer are drifting to the interior of the park but continue to graze across the high ridges.

I. GENERAL CONDITIONS,- Cont'.

Rangers in charge of the gateways to the park discontinued charging the regular entrance fee of \$7.50 for automobile tourists, October 10, upon orders of Superintendent Albright. Forty nine permits were sold during the month. Thirty two tourists received permits from the Chief Ranger's Office to travel through the park to West Yellowstone or to visit nearby scenic regions. Five permits were issued to local hunters to bring game birds through the park and three permits were issued to members of the National Park Service to hunt predatory animals, while two not in the Service received the same permits.

Superintendent Albright, in an order issued October 15, 1920; prohibited all fishing in the Madison river and its tributaries. This action was taken upon recommendation of Chief Ranger McBride to protect the large Rainbow and LockLeven trout spawning in its headwaters. The action received many compliments from lovers of the fishing sport.

Four steers, one cow and one calf, impounded by order of Superintendent Albright September 1, after receiving due publicity in the districts in which they were found; became the property of the United States government October 1 and will be sold at public auction as prescribed by the Department of the Interior Dec. 1,.

They are described as follows :

Four (4) steers, one year and one half old.
Brand -- D (D bar) on right side.

One (1) cow,
Brand -- V.A. on left hip.

One (1) calf, suckling.
Unbranded.

Notices of sale for the above named stock was mailed to the following:

W.A. Hall Company, Gardiner, Mont.
Postmaster, Gardiner, Mont.
Postmaster, Emmigrant, Mont.
Postmaster, Livingston, Mont.
Postmaster, Yellowstone Park, Wyo.
Postmaster, Corwin Springs, Mont.

Posted in Park ?

II. PERSONNEL.

All applications for Ranger positions have been approved by the Secretary of the Interior upon the recommendation of Superintendent Albright, which brings the force to its stipulated quota.

Ranger Hans Larson, temporary, Crevice station became a member of the permanent force October 1.

Temporary Ranger E.M. Meade, W.A.E., on duty checking cars at the West Yellowstone entrance to the park was relieved from duty October 10, when all entrances to the park were closed.

Robert Wilkenson, employed as car checker at the Sylvan Pass (East) entrance reported at Mammoth Hot Springs October 13, 1920. He performed Ranger duties but was not classed as such.

Temporary Ranger Sam Hurlless, detailed to supervise the cutting of wood at the Upper Basin Station completed his duties October 22, after which his service terminated.

Ass't. Chief Ranger James Brooks, in charge of the eastern and southern districts of the park, received an appointment as Chief Ranger of Glacier National Park. His services terminated in Yellowstone National Park October 13, after which, he left directly for Glacier National to resume his new duties.

Leaves of absences.

No applications for leaves by any member of the Ranger force were made during the month.

The following made official trips to headquarters during the month:

B.C. Lacombe (2)
Hans Larsen (4)
Charles J. Smith
Court B. Dewing

James Dupuis (2)
F.J. Townsend (2)
Henry Anderson (2)
Peter Lawson.

Chief Ranger McBride returned from ^a three week inspection tour around the park borders October 23. His reports show that the out-lying districts of the park are exceedingly ^{well} protected and all snow-shoe cabins are in first class condition for the winter.

III. WORK COMPLETED.

Rangers with the assistance of the Chief Carpenter completed minor repairs on all of the stations. Personal property and supplies have been received by all of the men on the force. The weather conditions were favorable to complete the work of supplying the Ranger stations with the last of the necessary articles.

Station work.Mammoth Hot Springs.

Rooms formerly occupied by Rangers in the old Bachelor quarters were vacated during the month. Superintendent Albright assigned the lower floor of the old headquarters building to the Ranger force for their use.

Supplies for the following stations were ~~the~~ shipped from headquarters:

Norris	One truck load hay.
Riverside	One truck load of commissary articles.
	One truck for cabin delivery purposes.
Upper Basin	One truck for personal property of Hurless.
Snake River	One truck load hay.
	One truck trail crew supplies.
Lake	One truck load supplies.
	One truck of supplies for Upper Yellowstone Station.
Buffalo Ranch	One truck supplies.
	Two trucks oats.
	One truck bran and oats.
Canyon	One truck of rations.
Soda Butte	One truck supplies and lumber and etc.
Gardiner	One truck grain.
	One truck coal.

Irregular patrols and the care of loose stock was attended to.

III. WORK COMPLETED.

Station Work.

Morris.

Ranger F.J. Townsend,- Minor repairs about the station and the cutting of the winter supply of wood have been completed. The Chief Carpenter visited the station to install a steel joist in the barn where a broken timber caused it to spread.

Patrols were made to the Canyon and Grizzlie Lake areas in addition to official patrols to Mammoth Hot Springs. While patrolling these areas, two herds of elk were seen number 300 and 68. Several bear continue to roam about the vicinity of the station while none can be seen daily at the Canyon. Signs of moose were also observed. Predatory animals are numerous in the vicinity. No change in the geyser basin was reported.

Riverside.

Rangers Ford Purdy, Luther Custer and Ass't. Chief Ranger Charles J. Smith,* Signs relative to the fishing in the Madison river were posted along its waters and tributaries. A truck was used to haul hay to the Greyling and Maple creek snow-shoe cabins for use during the hunting season.

The reports show that two elk were killed in the district both of which occurred during the first of the hunting season in the Gallatin mountains more than five miles from the park line. Three hunting parties were camped on the Madison river near the park line but became discouraged and left before securing any game.

Very few elk are to be seen in the entire district. One herd of seventeen have been seen near the Baker Hole on the Madison. Predatory animals are numerous.

One man has been on duty at the station during the month checking the automobile traffic through the park. One man pitched his camp on the park line for the hunting season on October 12.

West Gallatin.

Rangers Roy Frazier and Sam Woodring,- Rations were taken to the Sportsman Lake and Greyling cabins by use of pack horses for their needs during the hunting season.

One man made regular patrols to the Sportsman Lake district. One man has been stationed on the park line during the hunting season to date.

III. WORK COMPLETED.

Station work.South RiverSide.

Ass't. Chief Ranger C.J. Smith,- Patrols in this region have been made regularly during the hunting season, extending south to Buffalo lake. All big game in the regions are reported scattered and grazing very high in the mountains. Though snow is said to be fourteen inches deep along the top of the mountains, no ~~at~~ change was observed in the game activity.

Bechler River.

Rangers Raymond Little and Lee Cottrell,- Weather conditions made it possible for Ass't. Chief Ranger Harry Trischman to erect a 3/4 inch cable across the Falls river east of the station. The cable is 235 feet long and is used as a track for a two passenger coupe to ford the river. Previous to the completion of the cable-way the Rangers were forced to wade the river during the winter and summer which made patrolling in the district dangerous due to the smooth river bottom and its great width.

Extensive repair work on the Cascade creek cabin was also completed. A small pack train carried 60 rations to the cabin where regular stops are made by rangers patrolling that area during the hunting season. One man has been camped on the park line to date during the hunting season.

Several large herds of elk and moose was seen in the district but no count was reported.

Snake River.

Rangers William Purdue and Earl Bowman,- Temporary quarters and trails were constructed on Harebell creek for use during the hunting season. Thirty rations were packed to the camp. Rations for the Fox creek and Cascade cabins were also delivered. All pack and trail crews working in the vicinity completed the seasons work on or before Nov. 1.,.

One herd of 200 elk was seen drifting out of the park and another herd of 57 have been feeding on the Snake river. One herd of 12 Moose was also reported.

One man was on station duty until October 22, checking automobile and pack outfits traveling into the park.

III. WORK COMPLETED.

Station work.

Lake.

Rangers James Russell and A.T. Bicknell,- For the purpose of keeping a check on the water of the Yellowstone Lake, a gauge was placed along the lake shore where daily observations were made. The reports show that the water in the lake fell 4 1/2 inches during the last 15 days of the month. These observations will be taken as long as the lake remains open.

All signs in the vicinity of the Lake and Canyon points of interest were taken down for the winter by these Rangers. Rations were taken across the lake for the Park Point and Upper Yellowstone snow-shoe cabins. The remodeling of the interior of the station was completed.

Two elk herds were seen during the latter part of the month, numbering 43 and 14. It is reported that they are drifting in a northerly direction. Seven bear are in the vicinity.

Regular patrols have been made to the Canyon Park Point and Thumb districts. One man has been patrolling at large.

Upper Yellowstone.

Rangers E.T. Scoyen and C.O. Davis,- Two feet of snow on the level near the station made it impossible to keep horses at the station. Skis were brought into operation to do the patrolling.

All preparations for the winter have been completed. The new cabin in the district is said to be the finest snow-shoe cabin in the park.

Many elk and moose have been seen on the high ridges during the month. The reports show that these animals are not drifting.

Sylvan Pass.

Ranger R.R. Wisdom,- Extensive hunting in the district was brought to a sudden close by the effective patrolling by the Ranger in charge of this district. (See arrests)

Rations were packed to the cabin on Eagle creek for the few patrols to be made into that territory.

III. Work Completed.

Station work.Sylvan Pass, Cont'.

Eleven hunting parties have been camped near the park line on Jones creek for the past ten days but have been unsuccessful in killing big game.

The reports show that there are no elk moose or other big game in the lowlands of the district. But one elk has been killed up to date of this season on the eastern border of the park.

Tower Falls.

Ranger James Dupuis,- Patrols designated by Chief Ranger McBride and the herding of ranger and D.off. horses from Mammoth to the Slough creek Horse Ranch has made regular patrolling impossible. Drifting buffalo also required attention.

According to the reports, more than 1500 elk are grazing on Mount Norris. These elk are said to be in excellent condition and are not inclined to drift to the lowlands. Deer and fur bearing animals are reported ~~abundant~~ abundant in the north eastern section.

Three trapping parties have located on the north boundary of the park and have placed their trap lines on Slough creek and its headwaters.

Soda Butte.

Rangers George Winn and Henry Anderson,- The Rangers at this station have completed a snow-shoe cabin on the north park line for use during the hunting season. One man is stationed there at all times.

Game in large herds are in the vicinity but no count was reported.

Chief Carpenter Webb attempted to repair the station but was unable to make an effective showing due to the poor condition of the foundation.

The buffalo in the vicinity of the station are said to be in good condition and feeding under excellent conditions.

One death among the herd was reported. (See Buffalo).

III. WORK COMPLETED.

Station work.

Hellroaring.

Rangers Peter Lawson and Clifford Anderson,- These men have made temporary quarters on Hellroaring M't'n. for the hunting season. Daily patrols are made over the entire district. ✓

Probably the most favorable game reports for the park are from this district. Two bands of elk on Hellroaring and Slough creek, numbering 1500 in each herd, are seen regularly by these Rangers. Seven moose are grazing on Buffalo Mountain with forty black tail deer. Four mountain sheep have also been seen in this neighborhood. ✓

Eleven hunters, said to be from Big Timber and Boulder, Mont. have been seen in the district. Confirmed reports say that two elk have been killed by these hunters. Both elk were killed on Boulder Mountain. ✓

One moose was killed in violation of the law in that district. (See moose report). ✓

Crevices.

Rangers Court Dewing and Hans Larsen,- Two trips with pack horses were made by these Rangers in transporting their winter supplies to the station. ✓

Game is said to be high in the mountains in the districts. Three hunting parties have been seen in the neighborhood but no animals were killed to the best of their knowledge. ✓

Gardiner.

Sheds have been completed to store hay and other government supplies which will eliminate trucking and handling costs. Though these sheds will not be used regularly, they will be a big advantage in an emergency case. Other minor repairs were made. ✓

One man was held at the station during the month to inspect and check traffic into the park. His report shows that 110 tourists came into the park through ~~that~~ the northern entrance.

One man made regular patrols along the park line. His reports ~~show~~ indicates big game animals are still grazing in the mountains. Seventeen elk were seen and about 300 antelope in the hay field and on the target range near the station. ✓

VII. POLICIES.

The following changes have been made in the policy to be followed by members of the Ranger force:

No fishing will be permitted in the Madison river or its tributaries. Persons violating the order should be prosecuted. ✓

It shall be unlawful for any person to have in his possession game meat or any part of said animal. An act of congress makes possession alone, a violation of the law.

That no person or persons shall be permitted to use the trails of this park with firearms, sealed or unsealed in their possession. When coming in contact with such persons, they should be taken into custody and tried before the Commissioner on a charge of hunting within the Yellowstone Park.

There will be but three men not in the National Park Service who will be permitted to kill predatory animals within the park. Others must be dealt with according to the law.

A drastic change ^{not only} must be made in the care of government property by outsiders but by members of the Ranger force as well. Persons violating this order will be held responsible for the damaged property.

(The above drafts are similar to notices mailed all members of the Ranger force.)

IX. OTHER MATTERS OF INTEREST.

Game.

All men of the department are lending every effort to make the hunting season from a protective standpoint, the most successful in the history of the park. Disappointment in the number of elk to be seen predominates among many of the Rangers while some of the "old timers" claim the herds have increased 10 percent with the favorable climatic conditions and excellent grazing grounds. ✓

Though no count of the game herds have been made to date, Rangers have been instructed to keep a constant check on all game seen. ✓

IX. OTHER MATTERS OF INTEREST.

Game.

ANTELOPE.

Numerous estimates of these animals vary from one to three hundred. Reports from the Gardiner Station show the number to be 340 in that vicinity. Rangers crossing the Black Tail and Turkey Pen ranges reported stray bands in small numbers.

Their condition is said to be fair and though no count has been received relative to the young animals it is estimated that the births increased the herd about 15 percent. Rumors relative to these animals have made their protection in every detail a very essential duty.

BUFFALO, tame herd.

Holding the buffalo in the vicinity of the Buffalo ranch during the fore part of the month was very difficult, according to Buffalo Keeper Lacombe. Their actions were very much out of the ordinary. During a heavy storm October 29, contrary to past habits, they willingly turned and returned to their former feeding grounds along the ridge of Mount Norris.

Preparations for the castration and vaccination of the Herd Nov. 5 is being completed. One young buffalo bull is being prepared for shipment to the Toledo Zoology Society.

The circumstances surrounding the death of a Fifteen year old buffalo bull near Soda Butte has aroused no small amount of anxiety among the park officials. The bull was apparently in good condition when last seen alive October 16. It is thought death was due to a poisonous weed which resulted in its death the following day. It is thought the swamp poison had nothing to do with it.

BEAR.

Dispite numerous cold snaps and heavy snow fall, bear continue to roam in their native haunts. They are reported to be in excellent condition. Their distruction of property at the resorts in the interior of the park has been responsible for many complaints. They were received from the following places:

Canyon	Ranger Station
Camp Roosevelt	Y.P.C. Company.
Canyon	Y.P.C. Company.
Canyon	Y.P.H. Company.

IX. OTHER MATTERS OF INTEREST.

Game.

BEAR.

Draft of report telephoned by Ranger C.O. Davis on killing of bear on the night of October 10.

About 2 a.m. the bear broke into the Lake Ranger station through a rear door. He was a small black bear with a viscious disposition. Rations for the Upper Yellowstone Station was stored in the kitchen.

Upon hearing the bear enter the station, Davis slipped into a few clothes with the intention of running the bear out. After several approaches ~~the bear raised on his hind feet and dashed at~~ Davis who held a 45 revolver in his hand. One shot was fired in self defence which killed the bear.

An report of the incident was made the following morning to Chief Ranger McBride. The bear was skinned and the hide brought to the Chief Rangers Office for proper disposition.

Draft of shooting of bear by J.F. Wilson, winter keeper for the Yellowstone Park Hotel company, station at the Canyon Hotel. October 13, 1920.

About 9 p.m. a large black bear broke into the kitchen of Wilson's quarters while he was preparing for the night. He claimed the bear began to loot his supplies. He snatched his rifle and shot the bear in the doorway of his quarters.

No report of the killing was made nor did he secure permission from the authorities to kill the animal. He had received permission from the Chief Ranger's Office to shoot coyotes, wolves and mountain lion and thoroughly understood the regulations covering an unsealed gun.

He was ordered to report to the Superintendent after a report of the shooting was received. His permit was cancelled and gun sealed with orders not to brake the seal only in case of life or death. Other bear near the scene destroyed the carcass.

IX. OTHER MATTERS OF INTEREST.

Game.

ELK.

Estimates of the elk herd from reliable authorities put their number at 18,000. This will not be confirmed until Rangers make an official count of the numerous bands. ? 160

Though all efforts to protect the elk are being made no attempt to feed them hay on the regular feeding grounds will be made during the winter unless the conditions become serious. Forage is plentiful and during the month, the herds showed no intention of leaving their feeding grounds on the high ridges.

But one elk has been found dead to date this year. The animal was found by Ranger R.R. Wisdom October 11 on Jones creek. The head, hide and hind quarters had been removed which led the Ranger to believe that the elk had been killed recently.

An investigation of the affair which consumed several days pointed to the guilt of C.A. Pattison of Cody, Wyo. He was taken into custody October 15 and held at the Sylvan Pass Ranger station until the following day when a trial by telephone was conducted by U.S. Com. J.W. Meldrum. Pattison was found guilty and ordered to pay a fine of \$105.

"Bill" a renown animal of Mammoth Hot Springs returned to headquarters for the winter October 18. This elk was one of the leading attractions of the tourists season at Tower Falls. His presence meets with great disapproval.

MOOSE.

The reports from the Ranger Stations in the wilds of the park contain many moose reports. Signs of these animals are numerous and are quite frequently observed. This has led officials to believe their herds are increasing. ✓

A local guide, while conducting a party in the Hellroaring district outside of the park, shot a bull moose. He claimed he had received permission from the State Game Warden of Montana to shoot the animal. Officials of the Park and Forest Service disapproved of the killing and are conducting a thorough investigation. Possibly 20 animals have been harbored within the park in that district which is responsible for the disgust manifested by the Rangers of the department. These animals have been protected for many years and have become quite tame. ✓

IX. OTHER MATTERS OF INTEREST.

Game.

CARNIVEROUS ANIMALS.

Common sentiment among all of the Rangers relative to the coyotes and wolves is an increase of many numbers among the animals. These animals are seen daily.

Permits were issued to the following to kill the predatory animal on sight:

Lee Webb
Bert Stinnett
Sam Hurless

Frank Lind
J. McDonald
M.K. Musser.

X. ARRESTS.

C.A. Pattison, Cody Wyo. October 16, 1920.

Ranger R.R. Wisdom arrested Pattison on a charge of killing an elk within the Yellowstone National Park. He was found guilty by U.S. Commissioner John W. Meldrum and fined \$100 and costs. (\$5.50)

Clay Tyler. Cody, Wyo. October 20, 1920.

Tyler was taken into custody by Ranger R.R. Wisdom who found said party hunting with the Yellowstone National Park. He was tried before the U.S. Commissioner on the charge and ordered to pay a fine of \$25 and costs (\$2.75).

John L. Stillwell, Texas. October 20, 1920.

Stillwell was taken into custody with Tyler and dealt with in the same manner.

WMB.